

IN THE CLAIMS:

The following listing of claims replaces any earlier listing:

1-14. (canceled).

15. (previously presented) A balancing shaft for an internal combustion engine, produced by the method of claim_21, the balancing shaft consisting of a tubular hollow body and having a balancing weight arranged on the hollow body, the balancing weight being arranged on an outer circumference of the hollow body and being connected to the latter in an interference fit, wherein

the hollow body (2) is plastically expanded only at a location of its connection to the balancing weight (5) by an internal pressure inside the hollow body, and

the balancing weight (5) is expanded at this location due to a contact with the hollow body and then elastically springs back after the internal pressure is relieved.

16. (previously presented) The balancing shaft as claimed in claim 15, wherein the balancing weight (5) is integrally formed on a hub (12) which locally encloses and is secured to the hollow body (2).

17. (previously presented) The balancing shaft as claimed in claim 15, further comprising functional elements arranged as individual components on the hollow body (2) and connected to the hollow body (2) in an interference fit.

18. (previously presented) The balancing shaft as claimed in claim 17, wherein the balancing weight (5) and/or the functional elements are additionally connected to the hollow body (2) in a positive-locking manner.

19. (previously presented) The balancing shaft as claimed in claim 15, wherein the hollow body (2) is connected at one end in one piece with a connecting component (10) for drive components, the connecting component (10) closing the hollow body (2).

20. (previously presented) The balancing shaft as claimed in claim 19, wherein said drive components are selected from chain wheels and centrifuges.

21. (currently amended) A method of producing a balancing shaft having a balancing weight fastened to a hollow tubular body of the balancing shaft, the balancing weight being positioned on and fastened to an outer circumference of the hollow tubular body with formation of an interference fit, comprising:

introducing the balancing weight (5) onto the hollow body (2),

~~partially~~ plastically expanding the hollow body (2) by means of an internal high pressure inside the hollow body (2) locally only at a location of the introduced balancing weight (5),

expanding the balancing weight (5) due to a contact of the balancing weight (5) with the hollow body (2), and

relieving the internal high pressure so that the balancing weight (5) springs back elastically.

22. (previously presented) The method as claimed in claim 21, wherein, by means of a hub (12) on which the balancing weight (5) is integrally formed, said balancing weight (5) is pushed onto the hollow body (2) and is then fastened.

23. (previously presented) The method as claimed in claim 22, further comprising pushing functional elements, with a bore (11), as individual components onto the hollow body (2) and connecting to the latter, with an interference fit being formed.

24. (previously presented) The method as claimed in claim 23, wherein a wall of a through-opening (13) of the hub (12) and/or a wall of a bore (11) with which the balancing weight (5) and/or the functional elements are pushed onto the hollow body (2) are/is designed to be rotationally asymmetric, and in that, by means of fluidic internal high pressure, the hollow body (2) is connected to the balancing weight (5) and/or the functional elements in a positive-locking manner by at least partial contact with rotationally asymmetric surfaces of the wall of the through-opening (13) of the hub (12) and/or of the wall of the bore (11).
25. (previously presented) The method as claimed in claim 21, wherein at least one of open ends (9) of the hollow body (2) is friction welded to a connecting component (10) closing the end and intended for drive components.
26. (previously presented) The method as claimed in claim 25, wherein said drive components are selected from chain wheels and centrifuges.
27. (previously presented) The balancing shaft as claimed in claim 18, wherein the positive-locking is achieved by an asymmetric structure on an inner wall of a hub of the balancing weight and/or a bore of the functional elements.
28. The balancing shaft as claimed in claim 18, wherein the asymmetric structure includes an oval and/or hollows or longitudinal grooves formed on the wall.
29. (previously presented) The method as claimed in claim 21, wherein the internal high pressure is applied by broaching.
30. (previously presented) The method as claimed in claim 21, wherein the internal high pressure is applied by fluidic internal high pressure.

31. (previously presented) The method as claimed in claim 21, wherein the partial expansion of the hollow body (2) by the internal high pressure locally only at the location of the balancing weight is achieved by an internal high pressure forming die that has a negative contour of the balancing shaft outside the location of the balancing weight.

32. (previously presented) The method as claimed in claim 21, wherein the partial expansion of the hollow body (2) by the internal high pressure locally only at the location of the balancing weight is achieved by movable plungers to be inserted into the hollow body.

33. (previously presented) The method as claimed in claim 21, wherein the partial expansion of the hollow body (2) by the internal high pressure locally only at the location of the balancing weight is achieved by an expansion lance to be inserted into the hollow body.